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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/521,556 | 01/23/2006 | Takashi Tsunooka | 77670/597 | 2518 |
| 23838 | 7590 | 12/08/2006 | EXAMINER | |
| KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005 | | | CHANG, CHING | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3748 | |

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/521,556 | Applicant(s) TSUNOOKA ET AL. | |
| | Examiner Ching Chang | Art Unit 3748 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, and 12-13 is/are rejected.
- 7) ☒ Claim(s) 8-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>01/19/05, 08/10/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This Office acknowledges the Preliminary Amendment filed on 01/19/2005.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in Japan. It is noted, however, that applicant has not filed a certified copy of each of the Japanese Patent Applications 2003-146101, filed on 05/23/2003, and 2003-418590, filed on 12/16/2003 as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, "said correction amount" in claim 6 lacks an antecedent basis, thus renders the claimed subject matter in claims 6-7 indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. ***Claims 1-2 are rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Kamiyama (JP '779).***

Kamiyama discloses a control device of a multicylinder (1-6) internal combustion engine provided with a valve operating characteristic control means (including 6, 7, 11, 8, 9) for controlling a valve operating characteristic of at least one of an intake valve (2) and an exhaust valve (3), which estimates an intake difference of cylinders and limits a control range of the valve operating characteristic in accordance with the estimated intake difference, which limits said control range of the valve operating characteristic considering the engine speed and valve operating characteristic at the time of estimation of the intake difference in addition to the estimated intake difference.

7. ***Claims 1-2, and 12-13 are rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Nakasaka et al. (US Patent Application Pub. US 2002/0104520 A1).***

Nakasaka discloses a control device of a multicylinder internal combustion engine provided with a valve operating characteristic control means (22, 22', 9, 9', 11, 11', 60) for controlling a valve operating characteristic of at least one of an intake valve (2) and an exhaust valve, which estimates an intake difference of cylinders and limits a

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control range of the valve operating characteristic in accordance with the estimated intake difference, which limits said control range of the valve operating characteristic considering the engine speed and valve operating characteristic at the time of estimation of the intake difference in addition to the estimated intake difference; wherein the intake difference of cylinders is estimated based on the intake detected by an intake detecting means provided at an upstream side from an intake passage branching to an individual cylinder and wherein the intake detecting means (18) detects the intake at the time of a valve operating characteristic by which the timings of opening of the intake valves of the plurality of cylinders do not overlap; wherein said intake detecting means includes an intake pressure sensor.

8. ***Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Nakamura et al. (US Patent 6,390,041).***

Nakamura discloses a control device of a multicylinder internal combustion engine provided with a valve operating characteristic control means (10, 30, 31, 29, 18) for controlling a valve operating characteristic of at least one of an intake valve (12) and an exhaust valve, which estimates an intake difference of cylinders and limits a control range of the valve operating characteristic in accordance with the estimated intake difference, which limits said control range of the valve operating characteristic considering the engine speed and valve operating characteristic at the time of estimation of the intake difference in addition to the estimated intake difference; which controls an operating angle as said valve operating characteristic and sets a lower limit

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of control range of the operating angle larger the larger the operating angle at the time of estimating the intake difference; which controls a valve lift as said valve operating characteristic and sets a lower limit of control range of the valve lift larger the larger the valve lift at the time of estimating the intake difference; which controls an operating angle and/or valve lift as said valve operating characteristic and sets a lower limit of control range of the operating angle and/or valve lift larger the larger the intake difference estimated (See Col. 6, line 50 through Col. 12 line 25).

Allowable Subject Matter

9. Claims 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner


Ching Chang